

FOUR NEW SPECIES OF *ALLOGNOSTA* FROM CHINA (DIPTERA, STRATIOMYIDAE)

LI Zhu¹, ZHANG Ting-Ting², YANG Ding^{2*}

1. Beijing Museum of Natural History, Beijing 100050, China

2. Department of Entomology, China Agricultural University, Beijing 100193, China

Abstract Four species of the genus *Allognosta* from China are described as new to science: *A. basinigra* sp. nov., *A. caiqiana* sp. nov., *A. dalongtana* sp. nov., *A. liangi* sp. nov.

Key words Diptera, Stratiomyidae, *Allognosta*, new species, China.

Allognosta Meigen is characterized by the abdomen broad and distinctly depressed dorso-ventrally, abdominal tergites 2–6 each with subapical groove, scutellum without spines, and mid tibia with an apical spur (Yang and Nagatomi, 1992). It is distributed in the Nearctic, Palearctic, Oriental and Afrotropical Regions. The Palearctic and Oriental species were mainly studied by Frey (1961), Nagatomi and Tanaka (1969), Rozkošný (1982), Yang and Nagatomi (1992). The Chinese species was mainly studied by Yang and Nagatomi (1992). Here four new species are added to the fauna of China. The types are deposited in the Entomological Museum of China Agricultural University (CAU), Beijing.

1 *Allognosta basinigra* sp. nov. (Figs 1, 5–6)

Diagnosis. Thorax partly brownish yellow. Abdomen uniformly dark brown. Antenna brownish yellow with only scape black. Palpus with apical segment brownish yellow. All femora yellow; all tibiae black except bases brownish yellow.

Female. Body length 6.1 mm, wing length 4.6 mm.

Head subshiny black with thin pale gray pollen, except anterior frons not shiny but very densely micropubescent. Frons distinctly projected beyond eyes. Eyes widely separated on frons, dark brown. Frons slightly wider than eye; cheek and lower occiput wide. Postocular ring narrow dorsally. Hairs on head pale; hairs on eyes sparse. Antenna brownish yellow with only scape black; relative lengths of 3 antennal segments 5:5:19. Proboscis dark yellow, but partly black in middle, with black hairs; palpus blackish except apical segment dark yellow, with black hairs.

Thorax blackish with thin pale gray pollen, but mesonotum and scutellum subshiny black. Humeri and postalar calli brownish yellow. Pronotum, propleuron, anterior and dorsal portions of

mesopleuron, postero-dorsal corner of sternopleuron, upper portion of hypopleuron dark yellow. Hairs on thorax pale. Legs yellow except coxae blackish, tibiae and tarsi dark brown to black with bases of tibiae brownish yellow, mid tarsomere 1 and hind tarsomeres 1–2 dark yellow. Hairs on legs black except coxae with pale hairs, femora with pale hairs basally and ventrally. Wing uniformly tinged grayish, stigma dark brown, veins dark brown; posterior width of discal cell larger than apical width. Halter dark brown with dark yellow base.

Abdomen uniformly dark brown with pale gray pollen except cerci dark brownish yellow. Hairs on abdomen blackish.

Male. Unknown.

Holotype ♀, Shaanxi, Zhouzhi (34.1° N, 108.2° E), Houzhenzi, 20 June 2009, SHENG Mao-Ling.

Etymology. The specific name refers to the black base of the antenna.

Remarks. This new species is similar to *A. dorsalis* Cui, Li & Yang, but it may be separated from the latter by the antennal scape black, hind femur entirely dark yellow, and all tibiae with brownish yellow bases. In *A. dorsalis*, the antenna is entirely brownish yellow; the hind femur has a brown apical ring; the fore tibia is entirely brown (Cui, Li & Yang, 2009).

2 *Allognosta caiqiana* sp. nov. (Figs 2, 7–8)

Diagnosis. Face with two shiny black lateral spots. Thorax mostly yellow laterally. Wing partly brown or dark brown at middle and tip. Antenna yellow except apex brown. Palpus with apical segment brownish yellow. All femora yellow; all tibiae dark brown except bases yellow.

Female. Body length 4.0 mm, wing length 3.7 mm.

The research was supported by Training Expenditure of Beijing New Century Hundred, Thousand and Ten Thousand Talent Project.

* Corresponding author, E-mail: dyangcau@yahoo.com.cn, dyangcau@126.com

Received 28 Jan. 2011, accepted 28 Feb. 2011.



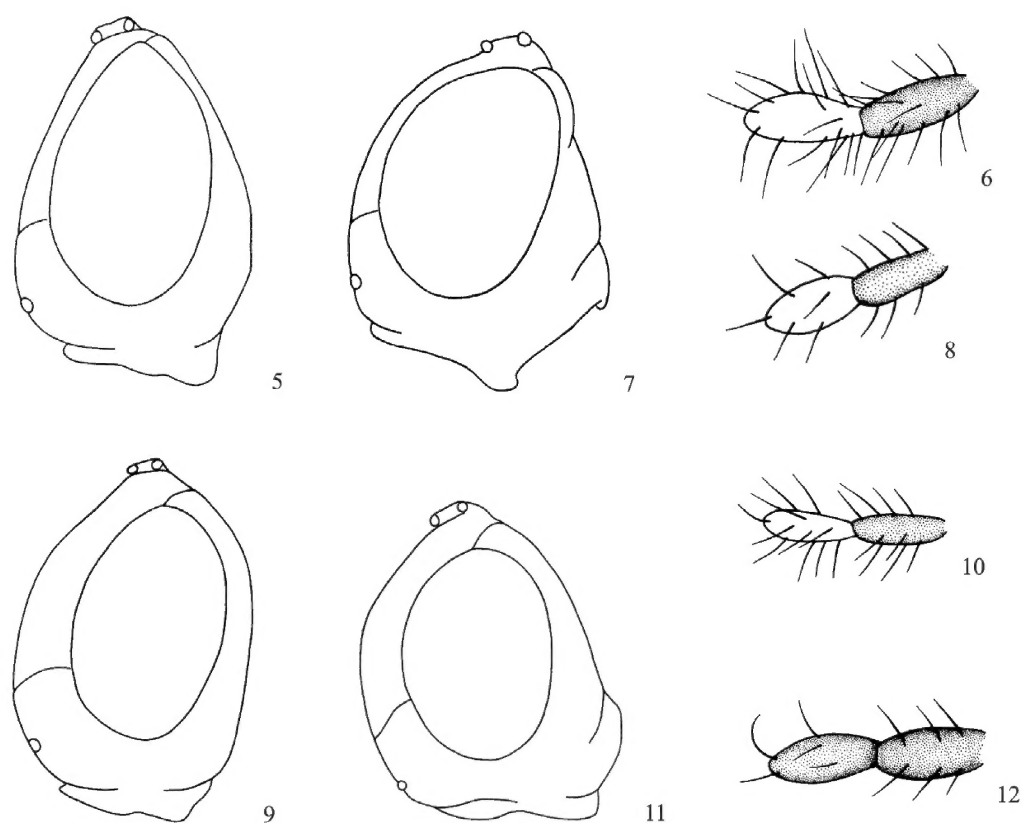
Figs 1–4. Female. 1. *Allognosta basinigra* sp. nov. 2. *Allognosta caigiana* sp. nov. 3. *Allognosta dalongtana* sp. nov. 4. *Allognosta liangi* sp. nov.

Head subshiny black with thin pale gray pollen, except anterior frons mostly not shiny but densely micropubescent, face with two shiny black lateral spots which are partly extended to the frons. Frons weakly projected beyond eyes. Eyes widely separated on frons, dark brown. Frons slightly wider than eye; cheek and lower occiput wide. Postocular ring distinct and nearly triangular dorsally. Hairs on head pale; hairs on eyes absent. Antenna yellow except apex brown; relative lengths of 3 antennal segments 4.0: 4.5: 16.0. Proboscis yellow, but partly black in middle, with black hairs; palpus brown except apical segment brownish yellow, with black hairs.

Thorax yellow with thin pale gray pollen, but mesonotum and scutellum subshiny black. Humeri and postalar calli brownish yellow. Pronotum brown

medially. Posterior portion of mesopleuron and anterior portion of pteropleuron brownish yellow; sternopleuron nearly entirely shiny black. Hairs on thorax pale. Legs yellow (including coxae), except tibiae and tarsi dark brown with bases of tibiae yellow, mid and hind tarsomere 1 yellow with dark brown apex. Hairs on legs black except coxae with pale hairs, femora with pale hairs basally and ventrally. Wing indistinctly tinged brownish except middle area just below stigma brown and apex narrowly dark brown; stigma dark brown, veins dark brown; posterior width of discal cell equal to apical width. Halter dark yellow with yellow knob.

Abdomen dark brown with pale grey pollen except tergites 1–4 each with one yellow median spot which become smaller backward; venter yellow, cerci



Figs 5–6. *Allognosta basinigra* sp. nov. 7–8. *Allognosta caiqiana* sp. nov. 9–10. *Allognosta dalongtana* sp. nov. 11–12. *Allognosta liangi* sp. nov. 5–12. Female. 5, 7, 9, 11. Head, lateral view. 6, 8, 10, 12. Palpus, lateral view.

brownish yellow. Hairs on abdomen pale except dorsum with blackish hairs.

Male. Unknown.

Holotype ♀, Hubei, Shennongjia (31.7° N, 110.6° E), Caiqi, 14 July 2009, LIU Qi-Fei.

Etymology. The species is named after the type locality Caiqi.

Remarks. This new species is similar to *A. fanjingshana* Cui, Li et Yang, but it may be separated from the latter by the thoracic pleuron mostly yellow, antenna brown apically, and wing partly brown or dark brown at middle and tip. In *A. fanjingshana*, the thoracic pleuron is mostly black; the antenna is entirely brownish yellow; the wing is nearly uniformly tinged dark brown (Cui, Li & Yang, 2009).

3 *Allognosta dalongtana* sp. nov. (Figs 3, 9–10)

Diagnosis. Thoracic pleuron partly dark yellow. Abdomen uniformly dark brown. Palpus with apical segment brownish yellow. All femora yellow; all tibiae black except bases brownish yellow. Mid tarsus entirely dark brown.

Female. Body length 6.0 mm, wing length 4.5 mm.

Head subshiny black with thin pale gray pollen, except anterior frons not shiny but very densely

micropubescent. Frons distinctly projected beyond eyes. Eyes widely separated on frons, dark brown. Frons slightly wider than eye; cheek and lower occiput wide. Postocular ring narrow dorsally. Hairs on head pale; hairs on eyes very sparse. Antennal scape and pedicel dark brown, flagellum brown with two last flagellomeres dark brown; relative lengths of 3 antennal segments 5:5:20. Proboscis dark yellow, but partly black in middle, with black hairs; palpus dark brown except apical segment brownish yellow, with black hairs.

Thorax mostly black with thin pale gray pollen, but mesonotum and scutellum subshiny black. Humeri and postalar calli brownish yellow. Propleuron mostly dark yellow; one dark yellow band from upper portion of mesopleuron to metapleuron. Hairs on thorax pale. Legs yellow except coxae dark brownish yellow, femora each with one black ventral spot at tip, tibiae and tarsi dark brown to black with bases of tibiae brownish yellow, hind tarsomere 1 yellow with dark brown apex. Hairs on legs black except coxae with pale hairs, femora with pale hairs basally and ventrally. Wing tinged grayish except apex darker, stigma dark brown, veins dark brown; posterior width of discal cell slightly larger than apical width. Halter dark brown with dark yellow base.

Abdomen uniformly dark brown with pale grey pollen. Hairs on abdomen blackish.

Male. Unknown.

Holotype ♀, Hubei, Shennongjia, Dalongtan, 29 June 2009, LIU Qi-Fei.

Etymology. The species is named after the type locality Dalongtan.

Remarks. This new species is similar to *A. basinigra* sp. nov., but it may be separated from the latter by the antennal scape and pedicel dark brown and flagellum brown with two last flagellomeres dark brown, mesopleuron entirely black, and mid tarsus entirely dark brown.

4 *Allognosta liangi* sp. nov. (Figs 4, 11–12)

Diagnosis. Abdominal tergites 1–4 with yellow median spots. All femora yellow; all tibiae black except bases brownish yellow; all tarsi black. Wing distinctly gray apically; discal cell elongated with posterior width distinctly larger than apical width.

Female. Body length 5.6 mm, wing length 5.6 mm.

Head subshiny black with thin pale gray pollen, except anterior frons not shiny but very densely micropubescent. Frons weakly projected beyond eyes. Eyes widely separated on frons, dark brown. Frons slightly wider than eye; cheek and lower occiput wide. Postocular ring distinct dorsally. Hairs on head pale; hairs on eyes absent. Antennal scape and pedicel dark brownish yellow, flagellum brown; relative lengths of 3 antennal segments 5:5:22. Proboscis dark yellow, but partly black in middle, with black hairs; palpus brown with black hairs.

Thorax black with thin pale gray pollen; mesonotum and scutellum subshiny black. Humeri and postalar calli brown; pleuron partly blackish. Hairs on thorax pale. Legs (including coxae) yellow to dark yellow except all tibiae and tarsi dark brown

with bases of all tibiae brownish yellow. Hairs on legs black except coxae with pale hairs, fore and mid femora with some pale hairs at base. Wing nearly hyaline, indistinctly tinged grayish except apex distinctly gray, stigma dark brown, cell R_{2+3} pale; veins dark brown; discal cell elongated with posterior width distinctly larger than apical width. Halter dark brown with brownish yellow base.

Abdomen dark brown with pale grey pollen except tergites 1–4 each with one yellow median spot which become smaller backward. Hairs on abdomen blackish.

Male. Unknown.

Holotype ♀, Yunnan, Lushui (25.9° N, 98.8° E), Gaoligongshan, Yaojiaping, 2 000–2 400 m, 12 Apr. 2010, LIANG Liang.

Etymology. The species is named after the collector Mr. LIANG Liang.

Remarks. This new species is somewhat similar to *A. maxima* Enderlein, but it may be separated from the latter by the coxae dark yellow, antennal flagellum uniformly dark brown, and wing gray apically. In *A. maxima*, the coxae are red brown; the antennal flagellum is partly darker; the wing is not darker apically (Yang & Nagatomi, 1992).

REFERENCES

- Cui, W-N, Li, Z and Yang, D 2009. New species of *Allognosta* from Guizhou (Diptera, Stratiomyidae). *Acta Zootaxonomica Sinica*, 34 (4): 795–797. [动物分类学报]
- Frey, R. 1961. Orientalische Stratiomyiden der subfamilien Beridinae und Metoponiinae (Dipt.). *Notulae Entomologicae*, 40: 73–85.
- Nagatomi, A. and Tanaka, A. 1969. The Japanese *Actina* and *Allognosta* (Diptera, Stratiomyidae). *The Memoirs of the Faculty of Agriculture, Kagoshima University*, 7 (1): 149–176.
- Rozkošný, R. 1982. A Biosystematic Study of the European Stratiomyidae (Diptera). Vol. 1. Introduction, Beridinae, Sarginae and Stratiomyinae. *Series Entomologica*, 21: 1–401.
- Yang, D and Nagatomi, A. 1992. A study on the Chinese Beridinae (Diptera: Stratiomyidae). *South Pacific Study*, 12 (2): 129–178.

中国距水虻属四新种 (双翅目, 水虻科)

李 竹¹ 张婷婷² 杨 定^{2*}

1. 北京自然博物馆 北京 100050

2. 中国农业大学昆虫学系 北京 100193

摘要 记述我国距水虻属 *Allognosta* 4 新种, 基黑距水虻 *A. basinigra* sp. nov., 彩旗距水虻 *A. caiqiana* sp. nov., 大龙潭距水虻 *A. dalongtana* sp. nov., 梁氏距水虻 *A. liangi* sp. nov.。模式标本保存在中国农业大学昆虫博物馆。

1 基黑距水虻, 新种 *Allognosta basinigra* sp. nov. (图 1, 5~6)

新种与背斑距水虻 *A. dorsalis* Cui, Li et Yang 近似, 但触

角柄节黑色, 后足腿节端部无暗环, 所有胫节黑色且基部黄褐色, 可与之区别。

正模 ♀, 陕西周至厚畛子, 2009-06-20, 盛茂领采。

词源: 新种种名意指触角基部黑色。

2 彩旗距水虻, 新种 *Allognosta caiqiana* sp. nov. (图 2, 7~8)

新种与梵净山距水虻 *A. fanjingshana* Cui, Li et Yang 近似,

* 通讯作者, E-mail: dyangcau@yahoo.com.cn, dyangcau@126.com

但胸侧大部黄色，触角端部褐色，翅中部和端部褐色或暗褐色，可与之区别。

正模 ♀，湖北神农架彩旗，2009-07-14，刘启飞采。

词源：新种种名以模式产地彩旗命名。

3 大龙潭距水虻，新种 *Allognosta dalongtana* sp. nov.（图 3, 9 ~ 10）

新种与基黑距水虻 *A. basinigra* sp. nov. 近似，但触角褐色至暗褐色，中胸侧板全黑，中足跗节全暗褐色，可与之区别。

关键词 双翅目，水虻科，距水虻属，新种，中国。

中图分类号 Q969.447.5

正模 ♀，湖北神农架大龙潭，2009-06-29，刘启飞采。

词源：新种种名以模式产地大龙潭命名。

4 梁氏距水虻，新种 *Allognosta liangi* sp. nov.（图 4, 11 ~ 12）

新种与大距水虻 *A. maxima* Enderlein 有些近似，但基节暗黄色，鞭节一致暗褐色，翅端部灰色，可与之区别。

正模 ♀，云南泸水高黎贡山姚家寨，2 000 ~ 2 400 m，2010-08-12，梁亮采。

词源：新种种名以采集者梁亮姓氏命名。